INDEX TO VOLUME 36

Aceto-carmine for sexing juvenile fishes, 56.
ADAMS, EVELYN S., and FREDERICK G. TOWLE: Use of a recompression chamber to alleviate gas-bubble disease in coho sac-fry, 41.
Aeromonas, effect of temperature on survival, 51–52.
Age, susceptibility of fish to disease, 151.
Alewives, landlocked, age and growth in newly established population, 163–164.
  predation by rainbow smelt, 223–224.
ALLEN, JOHN L. (see HUNN, JOSEPH B.), 157.
ALLEN, KENNETH O.: Notes on the culture of striped bass in tanks and small raceways, 60.
Alosa pseudoharengus (see Alewives, landlocked).
Amur, white, jumping and escapement from ponds, 15.
ANDERSON, JOHN R.: Glass V-trap, 53.
ANDERSON, LOWELL F. (see VOTH, DAVID R.), 213.
ANDERSON, RONALD J.: Feeding artificial diets to smallmouth bass, 145.
ANDERSON, WILLIAM K., and WILLIAM M. LEWIS: Use of a sudden temperature decrease to reduce the excitability of channel catfish during handling, 213.
Antimycin, removal and deactivation, 19.
Aquarium, for closed marine culture system, 8–14.
  tidal, for laboratory studies, 134–137.
Artemia salina (see Shrimp, brine).

BABCOCK, W. H. (see COCHRAN, J. O.), 177.
Bass, largemouth, comparison of flavors when fed natural and artificial diets, 216–218; raceway culture feeding fish pelleted diet, 108–110; trophic relations involving crayfish in ponds, 207–211.
  smallmouth, artificial diets, 145–151; effects of reduced oxygen on early development and survival, 187.
  striped, culture in tanks and small raceways, 60; harvesting fingerlings using glass V-trap, 53–55.
  white, effects of reduced oxygen on early development and survival, 188.
Behavior, size differences between fish, 138–144.
Blood, parameters for hatchery-reared trout, 49–50.
  separating components of small amounts with a clinical-type centrifuge, 184.
Bluegills, stocking, 66.
BOAZE, JOHN L., and ROBERT T. LACKEY: Age, growth, and utilization of landlocked alewives in Claytor Lake, Virginia, 163.
BORTHWICK, PATRICK W.: A clinical centrifuge tube for small blood samples, 184.
BOWKER, ROBERT G. (see NELSON, JOHN T.), 108.
BOYD, JOHN: A simple, rapid method for collecting pan hatched brine shrimp, 57; A portable sink with folding drain table, 58.
BRYAN, JESSE DAVID (see GREENLAND, DONALD C.), 181.
BUGBEE, STEPHEN L., THOMAS F. LORENZ, and LEOTIS MOSBY: Bottle rack for primary productivity studies, 183.
Bullheads, black, trophic relations involving crayfish in experimental ponds, 207–211.
BYRNE, CHARLES J. (see HOFFMAN, GLENN L.), 151.

Cage rearing, variation in weight of fish, 138–144.
Carbon, removing and deactivating antimycin, 19.
CARLSON, A. R. (see SIEFERT, R. E.), 186.
Cataracts, detecting and classifying, 165–168.
Catfish, channel, anchor tag loss, 181–182; cage-rearing, 138–144; grading using diversion screen, 78–79; renal elimination of quinaldine, 157–159; sudden temperature decrease to reduce excitability during handling, 213–215; trapping, 72–77; treatment for ichthyophthiriasis, 103–104; virus disease and stunting, 38–41; yield from shallow-water raceways, 46–48.
  mixed culture with mullet, 113.
Chiller for seawater system, 235.
Chlorine, detecting retention in power plant fish farms, 92–95.
  removing and deactivating antimycin, 19.
Chlorophyll extraction kit, 119.
Chondrococcus columnaris, effect of temperature on survival, 51–52.
Chromosome karyotyping method, 169–171.
Cisco, predation by planarians on eggs, 228.
Clams, soft, holding in aquariums, 114.
CLARK, ROBERT C., JR., and JOHN S. FINLEY: Tidal aquarium for laboratory studies of environmental effects on marine organisms, 134.
Claytor Lake, Virginia, landlocked alewives, 163–164.
Closed marine culture systems, problems and solutions, 8–14.
COCHRAN, J. O., and W. H. BABCOCK: A device for maintaining constant oxygen concentration in flowing water, 177.
CONTOS, NICHOLAS, and HANS ROTHENBACHER: An efficient concentration and purification method for spores of *Myxosoma cerebralis*, 101.
Coregonus artedii (see Cisco).
Corer, determination of vertical distribution in the benthos by Scuba, 27–28.
Crappie, black, length and weight changes in preserved fish, 201–206.
CRAWFORD, DAVID L., DUNCAN K. LAW, THOMAS B. MCKEE, and JOHN W. WESTGATE: Nutritional characteristics of Oregon pellet rations containing meals of different fish species, 3.
Crayfish, influence on growth and feeding behavior of other species in experimental ponds, 207–211.
Crowding, effect on heart rate and growth, 196–200.
Ctenopharyngodon idella (see Amur, white).
Culture, closed marine systems, 8–14
  intensive, 59.
  mullet and catfish mixed, 113.
  raceway, 108–110.
  shallow-water raceways, 46–48.
  tanks and small raceways, 60.

Data system for hatchery recordkeeping, 61–62.

DAWSON, VERDEL K., and LEIF L. MARKING: Removal and deactivation of antimycin using carbon and chlorine, 19.
Diet, artificial, 145–151.
flavor of fish fed natural or artificial food, 216–218.
forage fish, 96–98.
Oregon moist pellet, 59.
Oregon pellet formulations containing meals of different fish species, 3–7.
pellets for use in raceway culture, 108–110.
protein, 80–85.
Diversion screen for grading channel catfish, 78.
Dogfish, spiny, restraining apparatus, 115.
DORR, JOHN A., III: Construction of an inexpensive lighted sorting chamber, 63.
Dugesia tigrina (see Planarians).
Dye, aceto-carmine for staining gonadal tissue, 56.

Effluents, composition in shallow-water raceways, 46–48.
Eggs, fertilized with stored sperm, 42–45.
predation by planarians, 227–230.
Electrofishing, population estimation, 182.
ELLIOTT, STEVEN T. (see MEEHAN, WILLIAM R.), 16.
ELLIS, JAMES E.: Observations on the jumping and escapement of white amur, 15.
EMBERSON, CRAIG E. (see SYLVESTER, J. R.), 99.
Esox niger (see Pickerel, chain).
Eye examination for lens cataracts, 165–168.

FARR, WINSTON E. (see KREMA, RICHARD F.), 105.
Feeder, clock-type for pellets, 59.
demand, in relation to trapping and grading, 72, 78.
electrically operated automatic, 117.
to provide live brine shrimp, 133.
Fertilization, effects of quantity of stored sperm and water, 42–45.
Filter for seawater system, 234.
FINLEY, JOHN S. (see CLARK, ROBERT C., JR.), 134.
Fintrol Concentrate—dye mixture, a vehicle for distributing fish toxicants, 192–195.
Flounder, winter, operating table for surgery, 111.
Food, fish as spring forage in Maine lakes, 96–98.
Formalin, control of *Ichthyophthirius multifiliis*, 103–104.
FRANCIS, A. A., FRANCES SMITH, and PETER PFUDERER: A heart-rate bioassay for crowding factors in goldfish, 196.
FRESHMAN, WALTER J. (see KUNESH, WILLIAM H.), 225.

GALE, WILLIAM F., and J. DOUGLAS THOMPSON: Placement and retrieval of artificial substrate samplers by Scuba, 231.
Gas-bubble disease, 152–156.
recompression chamber as cure for affected fish, 41.
GEEN, GLEN H. (see JONES, BARRY C.), 115.
GILL, ROBERT L. (see GREENLAND, DONALD C.), 72.
GOLD, JOHN R.: A fast and easy method for chromosome karyotyping in adult teleosts, 169.
GOLDEN, PATRICIA (see NIGHTINGALE, JOHN W.), 61.
Goldfish, effect of crowding on growth and heart rate, 196–200.
Grading, using diversion screen, 78–79.
GRATZEK, J. B. (see MCGLAMERY, MERRILL H., JR.), 38.
Great Lakes, predation by rainbow smelt on young-of-the-year alewives, 223–224.
GREENLAND, DONALD C., and JESSE DAVID BRYAN: Anchor tag loss in channel catfish, 181.
GREENLAND, DONALD C., and ROBERT L. GILL: Trapping pond-raised channel catfish, 72.
GUERRERO, RAFAEL D., III, and WILLIAM L. SHELTON: An aceto-carmine squash method for sexing juvenile fishes, 56.
Guppies, effect of crowding on growth and heart rate, 197.

HACKNEY, P. A.: On the theory of fish density, 66.
HANSON, JAMES N.: Portable weir for measuring fish holding tank waterflow, 85.
HANSON, LEE H., EVERETT LOUIS KING, JR., JOHN H. HOWELL, and ALLEN J. SMITH: A culture method for sea lamprey larvae, 122.
Harvesting from production ponds, 76.
HASSE, JOHN: Utilization of rabbitfishes (Siganidae) in tropical oyster culture, 160.
HEIDINGER, ROY C., and JOHN B. STAHL: A portable apparatus for pressure sieving bottom samples, 116.
Hematological parameters for hatchery-reared cutthroat trout, 49–50.
HERMAN, L. J. (see SIEFERT, R. E.), 186.
HERSHBERGER, WILLIAM K. (see NIGHTINGALE, JOHN W.), 61.
HETTLER, WILLIAM F., JR.: A filter and chiller for an open seawater system, 234.
HOEHM, MAYNARD (see KUNESH, WILLIAM H.), 225.
HOFFMAN, GLENN L., and CHARLES J. BYRNE: Fish age as related to susceptibility to *Myxosoma cerebralis*, cause of whirling disease, 151.
HOLMAN, J. ANNE (see SMITH, ROSS A.), 133.
HOWELL, JOHN H. (see HANSON, LEE H.), 122.
HUGHES, JOHN T., ROBERT A. SHLESER, and GEORGE TCHOBANOGLOUS: A rearing tank for lobster larvae and other aquatic species, 129.
HUNN, JOSEPH B., and JOHN L. ALLEN: Urinary excretion of quinaldine by channel catfish, 157.
Hydraulic sampler, effectiveness compared to Surber sampler, 16–19.
Hypolimnion, method for stocking trout, 175–176.

Ichthyophthirius multifiliis, controlling with malachite green and formalin, 103–104.
Ictalurus melas (see Bullhead, black).
punctatus (see Catfish, channel).
Incubation, prolonging by exposing ova to low water temperatures, 219–222.

JOHNSON, JAMES E., and BRUCE L. SWANSON: Length and weight changes of preserved black crappie and yellow perch, 201.
JONES, BARRY C., and GLEN H. GEEN: Small shark restraining apparatus, 115.
JONES, ROY M. (see MCCRAREN, JOSEPH P.), 222.

KANGAS, PAUL M. (see RUCKER, ROBERT R.), 152.
KELLER, WALTER T. (see PLOSILA, DANIEL S.), 42.
KILGEN, RONALD H.: Artificial spawning and hatching techniques for blacktail redhorse, 174.
KING, EVERETT LOUIS, JR. (see HANSON, LEE H.), 122.
KIRCHNER, WARREN B.: A scuba diver operated corer for determining vertical distribution in the benthos, 27.
KLEINSCHUSTER, STEPHEN J. (see VOTH, DAVID R.), 212.
KONIKOFF, MARK, and WILLIAM M. LEWIS: Variation in weight of cage-reared channel catfish, 138.
KRAMER, ROBERT H. (see SMITH, ROSS A.), 133.

KREMA, RICHARD F., and WINSTON E. FARR: Floating fish trap for capture of homing salmon, 105.
KUNESH, WILLIAM H., WALTER J. FRESHMAN, MAYNARD HOEHM, and NORMAN G. NORDIN: Altering the spawning cycle of rainbow trout by control of artificial light, 225.

Labeling with Nalgene Poly-Paper, 238.
LACKEY, ROBERT T. (see BOAZE, JOHN L.), 163.
Lactobacillus, a new fish pathogen, 191.
Lamprey, sea, culture method for larvae, 122–128.
LANE, E. D.: An improved method of Surber sampling for bottom and drift fauna in small streams, 20.
LARSON, G. L. (see NICKELSON, T. E.), 90.
LAW, DUNCAN K. (see CRAWFORD, DAVID L.), 3.
Lebistes reticulatus (see Guppies).
LEMM, CAROL A. (see ORME, LEO E.), 165.
Length-weight relationships, 66–67, 90–91.
  changes in preserved fish, 201–206.
Lepomis macrochirus (see Sunfish, bluegill).
LEWIS, GERALD E.: Observations on the chain pickerel in West Virginia, 33.
LEWIS, WILLIAM M. (see ANDERSON, WILLIAM K.), 213.
  (see KONIKOFF, MARK), 138.
  (see WEHR, LARRY W.), 117.
LIENTZ, JOE C., and CHARLIE E. SMITH: Some hematological parameters for hatchery-reared cutthroat trout, 49.
Light, artificial, altering spawning cycle, 225–226.
Lobster rearing tank for mass culture of larvae, 129–132.
LORENZ, THOMAS F. (see BUGBEE, STEPHEN L.), 183.
LOVELL, R. T. (see SNOW, J. R.), 216.

MADDOCK, BRIAN G.: A technique to prolong the incubation period of brown trout ova, 219.
Maine lakes, fish as spring forage, 96–98.
Malachite green for control of *Ichthyophthirius multifiliis*, 103–104.
Marine culture systems, closed, 8–14.
Marking, freeze branding with liquid nitrogen, 172–174.
  table, 173.
MARKING, LEIF L.: Toxicity of Pyrethrin (SBP-1382) to fish, 144.
  (see DAWSON, VERDEL K.), 19.
MCCLEARY, JOHN D.: Near surface sampler, 233.
MCCRAREN, JOSEPH P., and ROY M. JONES: Restoration of sock filters used to prevent entry of wildfish into ponds, 222.
MCDANIEL, MIKE D.: Design and preliminary evaluation of an improved artificial substrate sampler for aquatic macroinvertebrates, 23.
MCGLAMERY, MERRILL H., JR., and J. B. GRATZEK: Stunting syndrome associated with young channel catfish that survived exposure to channel catfish virus, 38.
MCKEE, THOMAS B. (see CRAWFORD, DAVID L.), 3.
MEEHAN, WILLIAM R., and STEVEN T. ELLIOTT: Comparative effectiveness of the standard Surber sampler and a hydraulic modification for estimating bottom fauna populations, 16.
Micropterus dolomieui (see Bass, smallmouth).
  salmoides (see Bass, largemouth).
Modularized systems for field analysis of primary production in Chesapeake Bay, 119.
Morone americana (see Perch, white).
  chrysops (see Bass, white).
  saxatilis (see Bass, striped).
MOSBY, LEOTIS (see BUGBEE, STEPHEN L.), 183.
MOUNTFORD, KENT (see MULLEN, ROBERT S.), 119.
Moxostoma povcilurum (see Redhorse, blacktail).
Mugil cephalus (see Mullet, striped).
MULLEN, ROBERT S., ROBERT S. SHIPPEN, and KENT MOUNTFORD: Modularized systems for field analysis of primary production in Chesapeake Bay, 119.
Mullet, cultured with catfish, 113.
  striped, temperature tolerance of juveniles, 99–100.
Mya arenaria, holding in aquariums, 114.
Myxosoma cerebralis, fish age and susceptibility, 151.
  spore concentration and purification technique, 101–102.

NAGEL, TIM O.: Rearing of walleye fingerlings in an intensive culture using Oregon moist pellets as an artificial diet, 59.
Nalgene Poly-Paper as a label material, 238.
NASH, COLIN E.: Residual chlorine retention and power plant fish farms, 92.
  (see SYLVESTER, J. R.), 99.
NELSON, JOHN T., ROBERT G. BOWKER, and JOHN D. ROBINSON: Rearing pellet-fed largemouth bass in a raceway, 108.
NEWBURG, HUON J.: Planarians as a mortality factor on spawned fish eggs 227.
NEW HAMPSHIRE, introduction of coho salmon into coastal waters, 29–32.
NICKELSON, T. E., and G. L. LARSON: Effect of weight loss on the decrease of length of coastal cutthroat trout, 90.
NIGHTINGALE, JOHN W., WILLIAM K. HERSHBERGER, PATRICIA GOLDEN, and GLENN A. YOKOYAMA: A new hatchery data system, 61.
Nitrification, 8–14.
  toxicity to salmonoid fishes, 86–89.
Nitrogen supersaturation, effect on salmon, 152–156.
  recompression chamber as cure for affected fish, 41.
NORDIN, NORMAN G. (see KUNESH, WILLIAM H.), 225.

O'GORMAN, ROBERT: Predation by rainbow smelt *(Osmerus mordax)* on young-of-the-year alewives *(Alosa pseudoharengus)* in the Great Lakes, 223.
Oncorhynchus (see Salmon).
  kisutch (see Salmon, coho).
  tshawytscha (see Salmon, chinook).
Operating table for fish surgery, 111.
Orconectes (see Crayfish).
Oregon moist pellet, 3–7, 59, 145, 216–218.
ORME, LEO E., and CAROL A. LEMM: Trout eye examination procedure, 165.
Osmerus mordax (see Smelt, rainbow).
OVERHOLTZ, WILLIAM J.: A method for stocking trout in the hypolimnion of a lake, 175.
Oxygen, device for maintaining constant concentration in flowing water, 177–178.
  dissolved, analysis kit, 119.
  effects of reduced concentrations on early life stages of fish, 186–190.
Oyster culture, using rabbitfishes to clean equipment and to increase spatfall, 160–162.

Parasites, influence of waterflow on infected fish, 212.
PARKER, ROBERT L. (see TURNER, SPENCER E.), 172.
PARSONS, DAVID S., and JACK W. TATUM: A new shallow water multiple-plate sampler, 179.
Perca flavescens (see Perch, yellow).

Perch, utilization of fish as spring food in Maine lakes, 96–98.
yellow, length and weight changes in preserved fish, 201–206.
Petromyzon marinus (see Lamprey, sea).
PFUDERER, PETER (see FRANCIS, A. A.), 196.
PHILLIPS, E. S.: A portable and relatively inexpensive scale projector, 239.
Pickerel, chain, observations in West Virginia, 33–37.
Planarians, predation on spawned fish eggs, 227–230.
PLOSILA, DANIEL S., and WALTER T. KELLER: Effects of quantity of stored sperm and water on fertilization of brook trout eggs, 42.
Pomoxis nigromaculatus (see Crappie, black).
Population, estimation, comparative effectiveness of Surber sampler and a hydraulic modification, 16–19; 182.
reduction, 69, 192–195.
Predation, planarians on spawned fish eggs, 227–230.
rainbow smelt on young alewives, 223–224.
Preservatives, effect on length and weight changes of fish, 201–206.
PROCTOR, GORDON W. (see TURNER, SPENCER E.), 172.
Prosopium williamsoni (see Whitefish, mountain).
Protein requirements of rainbow trout, 80–85.
Pseudokidney disease, 191.
Pseudomonas fluorescens, effect of temperature on survival, 51–52.
Pseudopleuronectes americanus (see Flounder, winter).
Pyrethrin (SBP-1382), toxicity to fish, 144.

Quinaldine (2-methylquinoline), urinary excretion, 157–159.

Rabbitfishes in tropical oyster culture, 160–162.
Rearing tank for lobster larvae, 129.
Recompression chamber, cure for gas-bubble disease, 41.
Recordkeeping, waterproof hatchery data card, 61–62.
Redhorse, blacktail, artificial spawning and hatching techniques, 174.
REINECKER, RICHARD H., and MARY O. RUDDELL: An easily fabricated operating table for fish surgery, 111.
Restraining apparatus for small sharks, 115.
Rhabdochona sp., 212.
Rhodamine-WT, applied as a tracer to a deep lake with fish toxicant, 192–195.
RICKETT, JOHN D.: Trophic relationships involving crayfish of the genus *Orconectes* in experimental ponds, 207.
ROBINSON, JOHN D. (see NELSON, JOHN T.), 108.
ROSS, A. J., and CATHY A. SMITH: Effect of temperature on survival of *Aeromonas liquefaciens*, *Aeromonas salmonicida*, *Chondrococcus columnaris*, and *Pseudomonas fluorescens*, 51.
ROSS, A. J., and ROBERT J. TOTH: *Lactobacillus*—A new fish pathogen? 191.
ROTHENBACHER, HANS (see CONTOS, NICHOLAS), 101.
RUCKER, ROBERT R., and PAUL M. KANGAS: Effect of nitrogen supersaturated water on coho and chinook salmon, 152.
RUDDELL, MARY O. (see REINECKER, RICHARD H.), 111.

Salmo (see Salmon).
clarki (see Trout, cutthroat).
gairdneri (see Trout, rainbow).
trutta (see Trout, brown).
Salmon, chinook, effect of nitrogen supersaturated water, 155; rations required to raise in hatchery, 3–7.
coho, capturing homing fish in floating traps, 105–107; effect of nitrogen supersaturated water, 155; planting and return, 29–32; recompression chamber to alleviate gas-bubble disease, 41.
toxicity of nitrates and nitrites, 86–89.
Salvelinus fontinalis (see Trout, brook).
Sampler, artificial substrate, for aquatic macroinvertebrates, 23–25.
bottom and drift fauna, 20–22.
determining vertical distribution of benthic fauna with corer operated by Scuba diver, 27–28.
multiple-plate, for shallow water, 179–180.
near surface, 233.
placement and retrieval by Scuba, 231–233.
Surber and hydraulic, comparison of effectiveness in estimating bottom fauna populations, 16–19.
surface water dissolved oxygen, 26.
SATIA, BENEDICT P.: Quantitative protein requirements of rainbow trout, 80.
SAWYER, JAMES L.: Nalgene Poly-Paper as a label material, 238.
Scales, holding with tape for microscopic examination, 195.
projector, portable and inexpensive, 239–242.
SCHACHTE, JOHN H., JR.: A short term treatment of malachite green and formalin for the control of *Ichthyophthirius multifiliis* on channel catfish in holding tanks, 103.
SCHNEIDER, JAMES A.: Dispersion of a Fintrol Concentrate-dye mixture applied to the surface of a dimictic lake at fall overturn, 192.
Scuba, placement and retrieval of artificial substrate samplers, 231–233.
Seawater system with filter and chiller, 234–238.
Sex identification, aceto-carmine squash method, 56.
Sharks, restraining apparatus, 115.
SHELTON, WILLIAM L. (see GUERRERO, RAFAEL D., III), 56.
SHIPPEN, ROBERT S. (see MULLEN, ROBERT S.), 119.
SHIREMAN, JEROME V.: Preliminary experiment on striped mullet culture in freshwater catfish ponds, 113.
SHLESER, ROBERT A. (see HUGHES, JOHN T.), 129.
Shrimp, collecting from hatching pans, 57.
brine, as food in automatic feeder, 133.
SIDDALL, SCOTT E.: Studies of closed marine culture systems, 8.
SIEFERT, R. E., A. R. CARLSON, and L. J. HERMAN: Effects of reduced oxygen concentrations on the early life stages of mountain whitefish, smallmouth bass, and white bass, 186.
Sieving bottom samples by pressure, 116.
Siganidae (see Rabbitfishes).
Sink, portable with folding drain table, 58.
Smelt, rainbow, predation on alewives, 223–224.
SMITH, ALLEN J. (see HANSON, LEE H.), 122.
SMITH, CATHY A. (see ROSS, A. J.), 51.
SMITH, CHARLIE E. (see LIENTZ, JOE C.), 49.
SMITH, FRANCES (see FRANCIS, A. A.), 196.
SMITH, FRED G.: Transparent tape used to hold fish scales for microscopic examination, 195.
SMITH, ROSS A., J. ANNE HOLMAN, and ROBERT H. KRAMER: Automatic brine shrimp feeder, 133.
SNOW, J. R., and R. T. LOVELL: Comparison of organoleptic quality of largemouth bass fed natural and artificial diets, 216.
Sock filters to prevent entry of wildlife into ponds, 222.
Sorting chamber for rapid examination of samples, 63–64.
Spawning, altering cycle by controlling artificial light, 225–226.
SPENCE, LITER E., JR.: An inexpensive surface water dissolved oxygen sampler, 26.

Sperm, effects of storage and dilution on fertilization, 42–45.
Spore concentration techniques, 101–102.
Squalus acanthias (see Dogfish, spiny).
STAHL, JOHN B. (see HEIDINGER, ROY C.), 116.
Stizostedion vitreum vitreum (see Walleye).
Stocking, density, 66–71.
in hypolimnion of a lake, 175–176.
STOLTE, LAWRENCE W.: Introduction of coho salmon into the coastal waters of New Hampshire, 29.
Sunfish, bluegill, stocking, 66.
Surber sampler, bottom and drift fauna sampling, 20–22.
effectiveness as compared to hydraulic sampler, 16–19.
Surgery, easily fabricated operating table, 111.
SWANSON, BRUCE L. (see JOHNSON, JAMES E.), 201.
SYLVESTER, J. R., COLIN E. NASH, and CRAIG E. EMBERSON: Preliminary study of temperature tolerance in juvenile Hawaiian mullet *(Mugil cephalus)*, 99.

TACKETT, DEWEY L.: Yield of channel catfish and composition of effluents from shallow-water raceways, 46.
Tags, anchor, loss of Floy FD-67 and FD-67F, 181–182.
Tape, holding fish scales for microscopic examination, 195.
TATUM, JACK W. (see PARSONS, DAVID S.), 179.
TCHOBANOGLOUS, GEORGE (see HUGHES, JOHN T.), 129.
Teleosts, chromosome karyotyping adults, 169–171.
Temperature, control for flowing-water aquariums, 114.
effect on survival of several fish pathogens, 51–52.
sudden decrease to reduce excitability of fish, 213–215.
tolerance of juvenile mullet, 99–100.
THOMPSON, J. DOUGLAS (see GALE, WILLIAM F.), 231.
Tidal aquarium for laboratory studies of environmental effects on marine organisms, 134–137.
TOTH, ROBERT J. (see ROSS, A. J.), 191.
TOWLE, FREDERICK G. (see ADAMS, EVELYN S.), 41.
Trap, drop-seine and panel, constructed around feeding stations, 72–77.
floating, 105–107.
glass, V-, 53–55.
Trout, brook, fertilization of eggs, 42–45; influence of waterflow on parasite infection, 212; prolonging incubation period of ova.
cutthroat, effect of weight loss on decrease in length, 90-91; hematological parameters, 49–50.
eye examination for cataracts, 165–168.
rainbow, altering spawning cycle by controlling artificial light, 225–226; *Lactobacillus* infections, 191; protein requirements, 80–85; rapid marking by freeze branding, 172–174; stocking in hypolimnion of a lake, 175–176.
TUBIASH, HASKELL S.: A tempering reservoir and manifold for flowing-water aquariums, 114.
TURNER, SPENCER E., GORDON W. PROCTOR, and ROBERT L. PARKER: Rapid marking of rainbow trout, 172.

VALENTINE, JOSEPH J., and EDWARD J. PETERSON: Stocking walleye sac fry, 7.
VINCENT, RICHARD: Addendum to river electrofishing and fish population estimates, 182.
Virus, channel catfish, stunting syndrome, 38–41.
VOTH, DAVID R., LOWELL F. ANDERSON, and STEPHEN J. KLEINSCHUSTER: Influence of waterflow on brown trout parasites, 212.
V-trap, 53–55.

Walleye, predation on eggs by planarians, 227.
rearing fingerlings in an intensive culture, 59.
stocking sac fry, 7.
WARNER, KENDALL: Utilization of fish as spring food by white perch and yellow perch in Maine lakes, 96.
Water, flow, influence on parasite infection, 212; measuring in holding tanks, 85.
maintaining constant oxygen concentration, 177–178.
nitrogen supersaturated, 152–156.
sampler holder, 119.
shallow, multiple-plate sampler, 179–180.
WEHR, LARRY W., and WILLIAM M. LEWIS: An electrically operated automatic fish feeder, 117.
Weight, loss, effect on length decrease in fish, 90–91.
variation, behavioral effects, 138–144.
Weir, portable, measuring waterflow in holding tanks, 85.
WESTGATE, JOHN W. (see CRAWFORD, DAVID L.), 3.
WESTIN, DEBORAH T.: Nitrate and nitrite toxicity to salmonoid fishes, 86.
West Virginia, observations on chain pickerel, 33–37.
Whirling disease (see *Myxosoma cerebralis*).
Whitefish, mountain, brine shrimp as food, 133; effects of reduced oxygen on early development and survival, 187.

Yeast as a suitable lamprey food, 126.
YOKOYAMA, GLENN A. (see NIGHTINGALE, JOHN W.), 61.

☆ U.S. GOVERNMENT PRINTING OFFICE: 1975—585-342/1